

TITLE OF INVENTION
OIL SEED MEAL PREPARATION

FIELD OF INVENTION

[0001] The invention is directed to the preparation of oil seed meal for the recovery of protein therefrom.

BACKGROUND OF THE INVENTION

Change(s)
applied
to
document,
/P.A.P./
5/24/2011

[0002] In copending United States Patent Applications Nos. 10/137,391 filed May 3, 2002 (WO 02/089597) and 10/476,830 filed 6/9/2004, all assigned to the assignee hereof and the disclosures of which are incorporated herein by reference, there is described a process for producing a protein isolate of high purity, containing at least about 100 wt% protein when determined by the Kjeldahl or equivalent method as percent nitrogen (N) and multiplied by a conversion factor of 6.25. As used herein, the term "protein content" refers to the quantity of protein in the protein isolate expressed on a dry weight basis. In the aforementioned US Patent Applications, the protein isolate is made by a process in which oil seed meal is extracted with a food grade salt solution, the resulting protein solution, after an initial treatment with a colourant adsorbent, if desired, is concentrated to a protein content of at least about 200 g/L, and the concentrated protein solution is diluted in chilled water to form protein micelles, which are allowed to settle to form an aggregated, coalesced, dense amorphous, sticky gluten-like protein isolate mass, termed "protein micellar mass" or PMM, which is separated from residual aqueous phase and may be used as such or dried.

[0003] In one embodiment of the process described above and as specifically described in US Patent Applications Nos. 10/137,391 and 10/476,830, the supernatant from the PMM settling step is processed to recover a protein isolate comprising dried protein from wet PMM and supernatant. This procedure may be effected by initially concentrating the supernatant using ultrafiltration membranes, mixing the concentrated supernatant with the wet PMM and drying the mixture. The resulting canola protein isolate has a high purity of at least about 90 wt%, preferably at least about 100 wt%, protein (N x 6.25).

[0004] In another embodiment of the process described above and as specifically described in Applications Nos. 10/137,391 and 10/476,830, the supernatant from the